

Amendment
March 16, 2006

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AMENDMENTS TO THE SPECIFICATION

Please replace paragraph 0021 with the following amended paragraph 0021:

Figure 2B shows a cross-sectional example of another preferred embodiment in area B of Figure 2A with all other features being substantially the same. In this embodiment, a barrier layer 130 of any suitable non-platable metal is deposited on the wafer 100. Barrier layer 130 may be the same material as the grid lines, such as for example, Ni, Ta, TaN, Cu, Ti, TiW, Cr, W or any combinations thereof and, preferably, is tantalum nitride on tantalum (Ta/TaN). The barrier layer is patterned to open an orifice 132 at each electroplatable pad 112 and, essentially, form a donut shaped barrier ring 134 at each of the electroplatable pads 112. Donut shaped barrier rings 134 act as a liner or adhesion layer for the plating ~~[[is]]~~ to nucleate at the particular electroplatable pad 112. So, for this embodiment the electroplatable pads 112 serve a dual purpose acting as both the last copper wire level and to initiate metal nucleation during plating, which both Volant et al. and Walker et al. needed a separate seed layer deposited on the exposed portion of the electroplatable pad to accomplish.